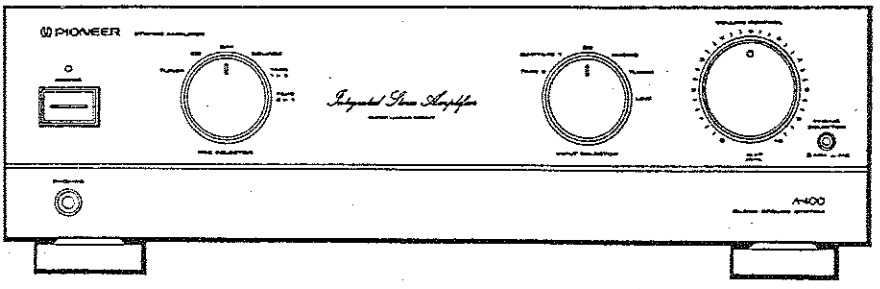
MASTER

Operating Instructions

STEREO AMPLIFIER

A-400
A-300



The illustration shows model A-400.

Thank you for buying this PIONEER product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

"This product complies with the Radio Interference requirements of the EC (European Community) Directive 87/308/EEC."

IMPORTANT 1

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT 2

If the apparatus is fitted with AC mains power outlet(s), see REAR PANEL FACILITIES for convenient connection of additional Hi-Fi component(s). Make all connections to the AC outlet(s) and the signal terminals first. Connect the plug to the wall socket last, make sure that the power switch is off.

THIS APPARATUS MUST BE EARTHED

FOR USE IN THE UNITED KINGDOM

The wires in this mains lead are coloured in accordance with the following code:

Green- and- Yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured marking identifying the terminals in your plug proceed as follows:

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or coloured green or green-and-yellow.
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.
Equipment sold in the U.K. is not supplied with a power plug.

PIONEER®
The future of sound and vision.

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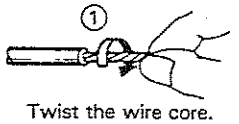
FEATURES

- Drive capacity 85 W + 85 W/4 Ω (DIN) matching to high power and low impedance type speaker system.
  [model A-300 ..... 60 W + 60 W/4 Ω (DIN)]
- The use of a Super Linear Circuit assures high fidelity playback of consistent frequency characteristics, accompanied by maximum clarity.
- Clean ground technology prevents noise on power line to flow to the signal ground line, permitting clean sound reproduction.
- REC selector switch makes tape editing very simple.
- Comes with a built-in phono equalizer which accepts MC cartridges. (A-400 only)
- Honeycomb Chassis, Honeycomb Heat Sink (Thorough anti-vibration construction).

CONNECTIONS

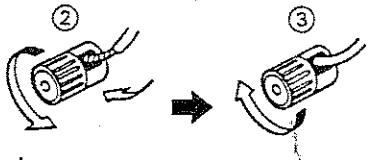
CONNECTING THE SPEAKER CORDS

1. Strip off the vinyl covering and twist the tip of the wire core.



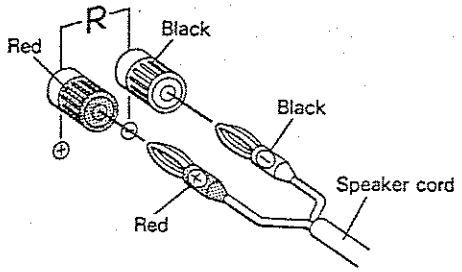
Twist the wire core.

2. Loosen the knob and insert the wire core into the terminal hole.
3. Tighten the knob to fix the wire core in place.



Using banana plugs
As shown in the diagram, insert the plugs all the way into the holes in the ends of the speaker terminals.

[Example: right channel]



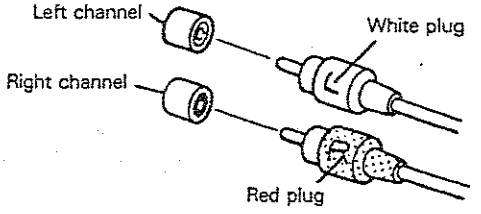
NOTE:
Do not allow the wire core to protrude and touch other terminals or wires. If the cores of differing wires touch, damage may be caused to your amplifier and/or speaker systems.

Speaker Impedance

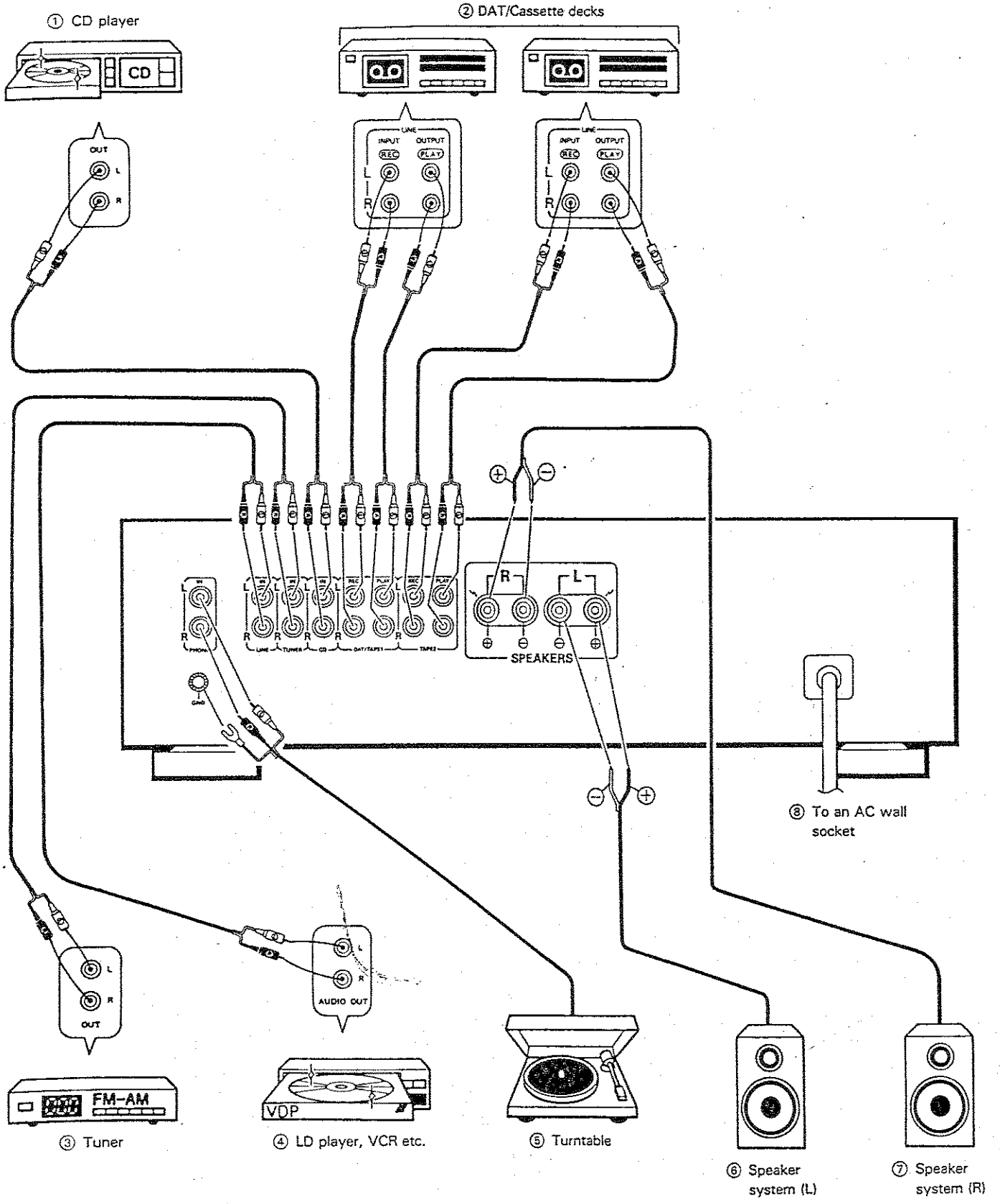
The speaker systems are connected to only SPEAKERS terminals, such speakers should have rated impedance in the range of 4 - 16 Ω.

CONNECTING THE Input/Output CORDS

Connect the white plug to the L (left) side, and the red plug to the R (right) side. Be sure to insert the plugs in securely.



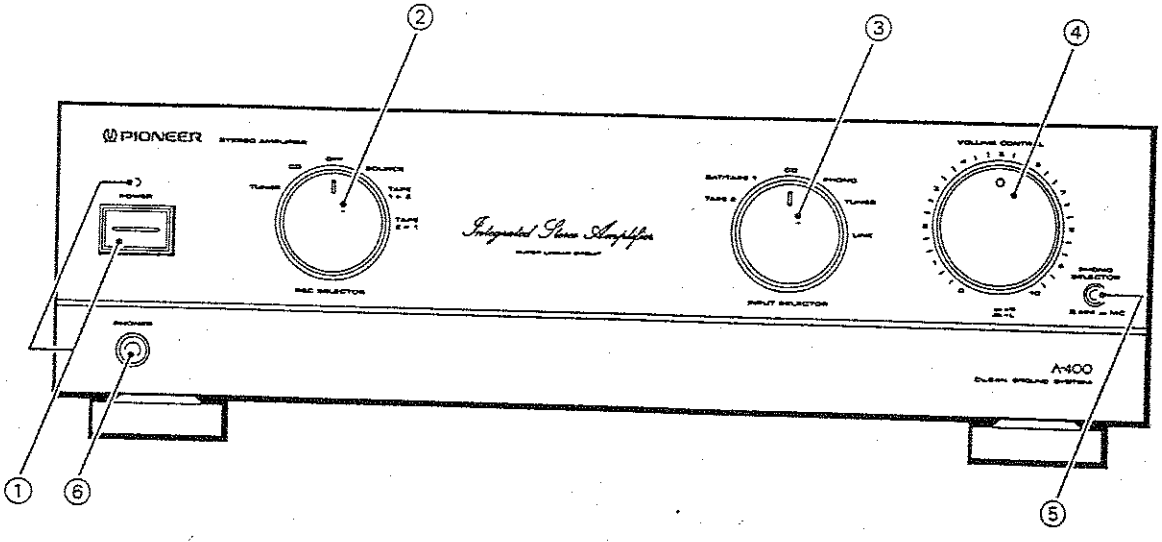
The Input/Output jacks of this unit are dull tinplated, aiming at high audio quality.


① CD player
CD
② DAT/Cassette decks
OUT
L
R
LINE
INPUT
OUTPUT
REC
PLAY
SPEAKERS
⑧ To an AC wall socket
AUDIO OUT
FM-AM
VDP
③ Tuner
④ LD player, VCR etc.
⑤ Turntable
⑥ Speaker system (L)
⑦ Speaker system (R)

PANEL FACILITIES

[FRONT PANEL]

The illustration shows model A-400.



① POWER switch/indicator

Press to turn power to the unit on and off.
When the power is on, the indicator lights.

② REC SELECTOR switch

When this switch is set to a position other than SOURCE or OFF, the equipment selected by REC SELECTOR switch can be recorded from, irrespective of the settings of INPUT SELECTOR and DIRECT switches.

TUNER:
To record from the equipment connected to TUNER terminals.

CD:
To record from the equipment connected to CD terminals.

OFF:
In this position, nothing from the REC terminals of DAT/TAPE 1 and TAPE 2 is output. Set to this position when not recording; the cassette deck will be disconnected, improving sound quality.

SOURCE:
To record from the equipment selected by INPUT SELECTOR switch.

TAPE 1 ► 2:
To record (copy) from the cassette deck of DAT/TAPE 1 terminals, to the cassette deck of TAPE 2 terminals.

TAPE 2 ► 1:
To record (copy) from the cassette deck of TAPE 2 terminals, to the cassette deck of DAT/TAPE 1 terminals.

③ INPUT SELECTOR switch

Use to select the playback source.

LINE:
For playback with a component connected to LINE terminal.

TUNER:
For AM or FM broadcast reception with a tuner.

PHONO:
For record playback with a turntable.

NOTE:

- *With the A-300, you can use an MM cartridge or a high-output MC cartridge (over 1 mV).*
- *According to the type of cartridge used with the A-400, you can select MM or MC with the PHONO SELECTOR switch.*

CD:
For compact disc playback with a CD player.

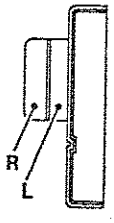
DAT/TAPE 1:
For playback with a cassette deck or digital audio tape deck connected to DAT/TAPE 1 terminals.

TAPE 2:
For playback with a cassette deck connected to TAPE 2 terminals.

④ VOLUME CONTROL

Use to adjust the volume level.
This volume knob consists of two volume controls. Because you can adjust L (left) and R (right) channel volume levels independently, it also functions as a balance control.

[Example]
To raise R (right) channel volume level, prevent the L knob from turning with one hand, and turn the R knob with the other hand.



⑤ PHONO SELECTOR switch (A-400 only)

Set in accordance with the type of cartridge used with your turntable.

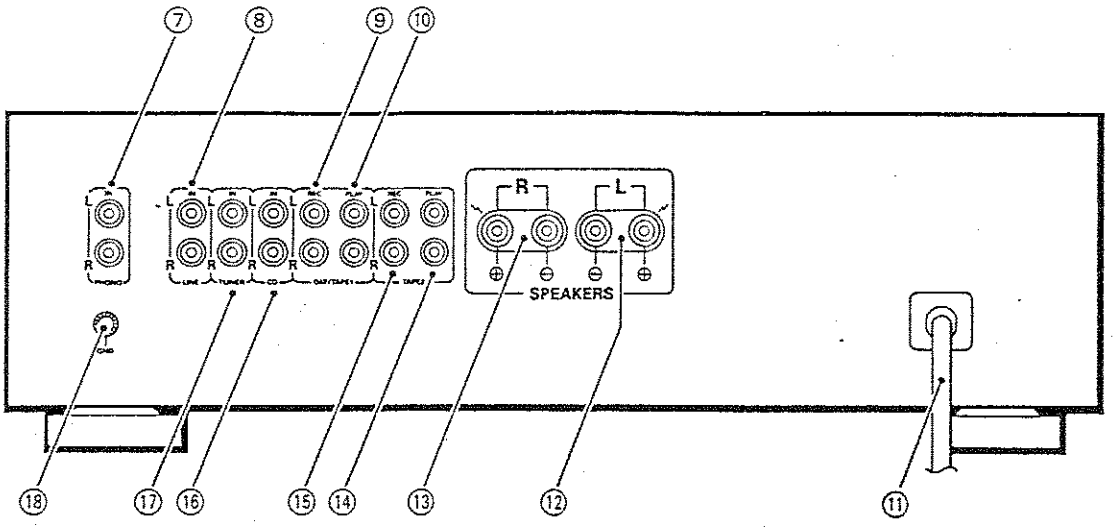
MM (▣):
Set to this position when using a moving magnet cartridge, or a moving coil cartridge with a high output of 1 mV or more.

MC (▬):
Set to this position when using a moving coil cartridge.

⑥ PHONES jack

When using headphones, insert the plug into this jack. The output to the speakers is cut automatically when connecting headphones.

[REAR PANEL]



⑦ PHONO terminals

⑧ LINE terminals

⑨ DAT/TAPE 1 REC terminals

⑩ DAT/TAPE 1 PLAY terminals

⑪ Power cord

Connect this cord to an AC wall socket, or the AC outlet of an audio timer.

⑫ SPEAKERS terminals L (left channel)

⑬ SPEAKERS terminals R (right channel)

⑭ TAPE 2 PLAY terminals

⑮ TAPE 2 REC terminals

⑯ CD terminals

⑰ TUNER terminals

⑱ Turntable ground terminal (GND)

OPERATIONS

PLAYBACK PROCEDURES

1. Set INPUT SELECTOR switch ③ to the desired playback source.
   - For playback with the equipment connected to LINE terminals: Set to [LINE].
   - For reception of an AM/FM broadcast: Set to [TUNER].
   - For playback of a record: Set to [PHONO].
     Set PHONO SELECTOR switch ⑤ to MM (▮) or MC (▬) according to the type of cartridge being used. (A-400 only)
   - For playback of a compact disc: Set to [CD].
   - For playback of a tape: Set to [DAT/TAPE 1] or [TAPE 2].
2. Operate the equipment to begin playback.
3. Adjust playback volume with VOLUME CONTROL ④ on this unit.

RECORDING TAPES

1. Select the recording equipment with REC SELECTOR switch ②.
   - When set to SOURCE, the signals from the device connected to the terminals of the selected input are recorded. (To record signals from the device connected to PHONO or LINE terminals, for instance set REC SELECTOR switch to SOURCE and set INPUT SELECTOR switch to PHONO or LINE accordingly.)
   - Recording is impossible when the switch is set to OFF.

NOTE:
When REC SELECTOR switch is set to a position other than SOURCE or OFF, the equipment selected by REC SELECTOR switch can be recorded from, irrespective of the settings of INPUT SELECTOR switch.

2. Begin recording by operating the recording equipment.
   Refer to the operating instructions for your cassette deck for proper operating procedures.

MONITOR WHILE OPERATING

On a 3-head cassette deck, sound can be concurrently heard recording on cassette. This operation of checking the sound quality and recording level is called "monitoring." For monitoring, INPUT SELECTOR switch of this unit must be set to the cassette deck on which recording is being done.

- When recording with the cassette deck connected to DAT/TAPE 1 terminals: Set to DAT/TAPE 1.
- When recording with the cassette deck connected to TAPE 2 terminals: Set to TAPE 2.

NOTE:
When recording from PHONO or LINE source, recording monitor is not possible.

COPYING TAPES

When two decks are used (or when using double cassette deck), you can record the sounds from one deck onto the other.

Application examples:

- To make a tape copy with contents identical to the original tape.
- To edit a recording of an FM broadcast in order to cut out unwanted commercials, recording only desired material onto another tape.

When using two cassette decks

1. Load tapes for playback (pre-recorded tape) and recording (blank tape) into the respective cassette decks.
2. Select the copying direction with REC SELECTOR switch ②.
   - When copying from the cassette deck of DAT/TAPE 1 terminals to the cassette deck of TAPE 2 terminals: Set to TAPE 1 ► 2.
   - When copying from the cassette deck of TAPE 2 terminals to the cassette deck of DAT/TAPE 1 terminals: Set to TAPE 2 ► 1.

NOTE:
The tape input selected with REC SELECTOR switch can be copied, regardless of the settings of INPUT SELECTOR.

3. Operate the cassette decks to begin copying.
   Set the cassette deck with the original (playback) tape to the playback mode, and set the cassette deck with the bland tape to the recording mode.

TROUBLESHOOTING

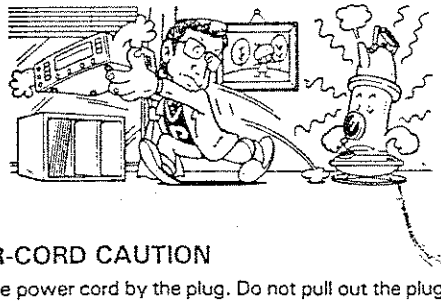
Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used.
If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

Symptom	Cause	Remedy
No power supplied to unit	• Power plug is disconnected from outlet. • The component power plug has been plugged into another component power outlet (e.g. timer, etc.) but power to that unit is disconnected.	• Insert plug securely into outlet. • Turn on power to the other component.
No sound	• Connecting cords are disconnected from terminals, or connected incorrectly. • Terminals, or connecting cords pin plugs are dirty. • INPUT SELECTOR switch is not set to the desired input source. • Operation of other components is incorrect.	• Connect securely. • Clean terminals and plugs. • Set the switch correctly (PHONO, TUNER, CD, LINE, DAT/TAPE 1, TAPE 2). • Consult the operating instructions for the other components.
No sound from one speaker	• Connecting cords or speaker cords are disconnected on that side.	• Connect securely.
Can't record tapes	• The position of REC SELECTOR switch is incorrect. • Connections are incorrect. • Operation of cassettte deck is incorrect.	• Set switch correctly (See section RECORDING TAPES). • Reconnect properly. • Consult the operating instructions for the cassette deck.
Can't perform tape copying	• The position of REC SELECTOR switch is incorrect. • Operation of cassettte deck is incorrect.	• Set switch correctly (See section COPYING TAPES). • Consult the operating instructions for the cassette deck.

LOCATION

Install the amplifier in a well ventilated location where it will not be exposed to high temperature or humidity.

Do not install the amplifier in a location which is exposed to direct rays of the sun, or near to hot appliances or radiators. Excessive heat can adversely affect the cabinet and internal components. Installation of the amplifier in a damp or dusty environment may result in malfunction or accident. (Also avoid installation near cookers etc., where the amplifier may be exposed to smoke from oil, steam or heat.)



POWER-CORD CAUTION

Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc,. on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

MAINTENANCE OF EXTERNAL SURFACES

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water, and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzine, insecticide sprays and other chemicals on or near this unit, since these will corrode the surfaces.

SPECIFICATIONS

[A-400]

Amplifier Section

Continuous power output (both channels driven at 20 Hz to 20 kHz) *
- T.H.D. 0.03 %, 8 Ω ..... 50 W + 50 W
- T.H.D. 0.05 %, 4 Ω ..... 70 W + 70 W

DIN Continuous power output (both channels driven at 1 kHz)
- T.H.D. 1.0 %, 8 Ω ..... 60 W + 60 W
- T.H.D. 1.0 %, 4 Ω ..... 85 W + 85 W

Dynamic power output (on EIA dynamic test signal)
- 8 Ω/4 Ω/2 Ω ..... 70 W/100 W/135 W

Total harmonic distortion *
- 20 Hz to 20 kHz, 50 W, 8 Ω ..... 0.03 %
- 20 Hz to 20 kHz, 70 W, 8 Ω ..... 0.05 %

Input sensitivity/impedance
- PHONO (MM) ..... 2.5 mV/50 kΩ
- PHONO (MC) ..... 0.2 mV/100 Ω
- CD, TUNER, LINE, TAPE ..... 150 mV/50 kΩ

PHONO overload level
- 1 kHz, T.H.D. 0.008 % (MM/MC) ..... 150 mV/12 mV

Output level/impedance
- TAPE REC ..... 150 mV/2.2 kΩ

Frequency response
- PHONO (MM) ..... 20 Hz to 20 kHz, ± 0.3 dB
- PHONO (MC) ..... 20 Hz to 20 kHz, ± 0.5 dB
- CD, TUNER, LINE, TAPE ..... 5 Hz to 100 kHz, $^{+0}_{-3}$ dB

Signal-to-Noise ratio (IHF short circuit, A network)
- PHONO (MM, 2.5 mV input/MC, 0.2 mV input) ..... 87 dB/69 dB
- CD, TUNER, LINE, TAPE ..... 108 dB

Signal-to-Noise ratio (DIN, continuous power/50 mW)
- PHONO (MM) ..... 74 dB/63 dB
- CD, TUNER, LINE, TAPE ..... 88 dB/65 dB

Power Supply/Miscellaneous

Power requirements ..... a.c. 240 V ~, 50/60 Hz
Power consumption ..... 520 W
Dimensions ..... 420 (W) x 352 (D) x 126 (H) mm
Weight (without package) ..... 8.0 kg

Accessories

Operating instructions 1

• *Specificatios and design subject to possible modification without notice, due to improvements.*

* *Measured by Audio Spectrum Analyzer.*

[A-300]

Amplifier Section

Continuous power output (both channels driven at 20 Hz to 20 kHz) *
- T.H.D. 0.03 %, 8 Ω ..... 30 W + 30 W
- T.H.D. 0.05 %, 4 Ω ..... 40 W + 40 W

DIN Continuous power output (both channels driven at 1 kHz)
- T.H.D. 1.0 %, 8 Ω ..... 40 W + 40 W
- T.H.D. 1.0 %, 4 Ω ..... 60 W + 60 W

Dynamic power output (on EIA dynamic test signal)
- 8 Ω/4 Ω/2 Ω ..... 50 W/75 W/90 W

Total harmonic distortion *
- 20 Hz to 20 kHz, 40 W, 8 Ω ..... 0.03 %
- 20 Hz to 20 kHz, 50 W, 8 Ω ..... 0.05 %

Input sensitivity/impedance
- PHONO (MM) ..... 2.5 mV/50 kΩ
- CD, TUNER, LINE, TAPE ..... 150 mV/50 kΩ

PHONO overload level
- 1 kHz, T.H.D. 0.02 % (MM) ..... 150 mV

Output level/impedance
- TAPE REC ..... 150 mV/2.2 kΩ

Frequency response
- PHONO (MM) ..... 20 Hz to 20 kHz, ± 0.3 dB
- CD, TUNER, LINE, TAPE ..... 5 Hz to 100 kHz, $^{+0}_{-3}$ dB

Signal-to-Noise ratio (IHF short circuit, A network)
- PHONO (MM, 2.5 mV input) ..... 83 dB
- CD, TUNER, LINE, TAPE ..... 108 dB

Signal-to-Noise ratio (DIN, continuous power/50 mW)
- PHONO (MM) ..... 73 dB/63 dB
- CD, TUNER, LINE, TAPE ..... 88 dB/65 dB

Power Supply/Miscellaneous

Power requirements ..... a.c. 240 V ~, 50/60 Hz
Power consumption ..... 410 W
Dimensions ..... 420 (W) x 352 (D) x 126 (H) mm
Weight (without package) ..... 6.8 kg

Accessories

Operating instructions 1

• *Specificatios and design subject to possible modification without notice, due to improvements.*

* *Measured by Audio Spectrum Analyzer.*

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